Louisiana Department of Environmental Quality (LDEQ)
Office of Environmental Services

STATEMENT OF BASIS

BFI Waste Services of Louisiana LLC
Colonial Landfill
Sorrento, Ascension Parish, Louisiana
Agency Interest Number: 4803
Activity Number: PER20060003
Proposed Permit Number: 0180-00035-V2

I. APPLICANT

Company:
BFI Waste Services of Louisiana, LLC
PO Box 605
Sorrento, Louisiana 70778-0605

Facility:
Colonial Landfill
5328 Hwy 70
Sorrento, Ascension Parish, Louisiana
Latitude 30° 8' 46.12", Longitude 90° 52' 2.86"

II. FACILITY AND CURRENT PERMIT STATUS

Colonial Landfill serves as a collection and disposal point for municipal solid waste. The decomposing waste encapsulated in the landfill produces gas which is primarily composed of methane, carbon dioxide, and numerous trace organic compounds. Colonial Landfill's design capacity is 6.97 million Megagrams (Mg). Since the design capacity is greater than 2.5 million Mg and 2.5 million cubic meters, the site is subject to the new Source Performance Standards (NSPS) with 40 CFR Part 60, Subpart WWW for municipal solid waste (MSW) landfills. The site is also subject to 40 CFR Part 63, Subpart AAAA – National Emission Standards for Hazardous Air Pollutants (NESHAP): Municipal Solid Waste Landfills.

Results of Tier 2 testing conducted in 2005 demonstrated that the emission rate of non-methane organic compounds (NMOCs) is greater than 50 Mg/yr.

The landfill utilizes a landfill gas collection and control system (GCCS) to control the landfill gas (LFG). The active GCCS is equipped with extraction wells to collect the LFG from the landfill and transport it to an enclosed flare for combustion. The flare is capable of combusting up to 2,951 standard cubic feet per minute (scfm) of LFG at 50% methane.

The enclosed flare is equipped with a flame safeguard and auto-ignition pilot system that provides automatic flare start-up. A master flow control valve along the main LFG header

regulates the amount of LFG extracted from the landfill. This valve is also used as an isolation valve to prevent the direct release of LFG emissions from the collection system during system repairs. Monitoring ports installed in the main header, upstream from the valve, measure LFG flow, pressure and composition.

A flare destruction efficiency of 98% is assumed to be achievable for volatile organic compounds (VOCs) and hazardous air pollutants (HAPs) (except hydrogen chloride (HCl), which is created during the combustion process).

Colonial Landfill occasionally receives liquid wastes on-site which require solidification prior to disposal. Particulate matter and VOCs are emitted during the solidification process.

III. PROPOSED PROJECT/PERMIT INFORMATION

Application

A permit application was submitted on July 20, 2006 requesting a renewal of and modification to the Part 70 operating permit for the Colonial Landfill. Additional information dated August 21, 2006 was also submitted.

Project

This permit renewal revises the calculated emissions of the enclosed flare to accurately reflect the correct design flow. The uncollected landfill gas emissions are updated to reflect actual waste acceptance rates obtained from the site and to reflect the most recent version of the landfill gas emissions model. The portable pumps emissions are being revised to reflect the replacement of the previous pumps (9 hp, 11 hp and 25 hp) with two 5 hp pumps. And, four new emissions points are being added: ARE5 – Solidification Operations; ARE8 – Earthmoving Operations; EQT8 – Leachate Storage Tank 1; and, EQT9 – Leachate Storage Tank 2. Two emissions points are being removed (Leachate Pond and Leachate Storage Tank).

Proposed Permit

Permit 0180-00035-V2 will be the renewal/modification of Part 70 operating permit 0180-00035-V1 for the Colonial Landfill.

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Permitted Air Emissions

Estimated emissions in tons per year are as follows:

Pollutant	Before	After	Change
PM_{10}	16.05	41.63	+25.58
SO_2	1.69	5.97	+4.28
NO_X	24.38	35.57	+11.19
CO	95.73	141.35	+45.62
VOC *	11.68	27.19	+15.51

IV REGULATORY ANALYSIS

The applicability of the appropriate regulations is straightforward and provided in the Specific Requirements section of the proposed permit. Similarly, the Monitoring, Reporting and Recordkeeping necessary to demonstrate compliance with the applicable terms, conditions and standards are also provided in the Specific Requirements section of the proposed permit.

Applicability and Exemptions of Selected Subject Items

ID No.	Requirement	Note
UNF 1- Plant Wide	40 CFR 68 – Chemical Accident Prevention Provision	DOES NOT APPLY. The facility does not have more than the threshold quantity of a regulated substance in a process, as determined under 40 CFR 68.115.
	40 CFR 82 – Protection of Stratospheric Ozone	DOES NOT APPLY. There are no applicable CFC chillers/coolers onsite.
	Fugitive Emission Control for Ozone Nonattainment Area and Specified Parishes [LAC 33:III.2122]	DOES NOT APPLY. Facility is not listed as being applicable in 2122.A
	Comprehensive Toxic Air Pollutant Emission Control Program [LAC 33:III.Chapter 51]	EXEMPT. Facility is not a major source of TAPs emitting less than 10 tons per year of any toxic air pollutant listed in LAC 33:III.5112, Table 51.1 or 25 tons per year or more of any combination of toxic air pollutants listed in LAC 33:III.5112, Table 51.1.
	Chemical Accident Prevention and Minimization of Consequences [LAC 33:III.5901]]	DOES NOT APPLY. A risk management plan is not required

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ID No.	Requirement	Note
		at this time since the threshold for a regulated substance is not exceeded.
EQT 2 – Enclosed Flare	Emission Standards for Sulfur Dioxide Continuous Emissions Monitoring [LAC 33:III.1511.A] Emission Standards for Sulfur Dioxide Recordkeeping and Reporting [LAC 33:III.1513]	DOES NOT APPLY. Units emit less than 250 tons of SO_2 per year. Record and retain at the site for at least 2 years the data required to demonstrate compliance with or exemption from SO_2 standards of Chapter 15. Compliance data shall be reported annually in accordance with LAC 33:III.918.
EQT 3 – Tank No. 1 (Diesel Tank)	Storage of Volatile Organic Compounds [LAC 33:III.2103]	DOES NOT APPLY. Vapor pressure less than 1.5 psia.
	NSPS Subpart Kb – Standards of Performance for Volatile Organic Liquid Storage Vessels [40 CFR 60.110]	DOES NOT APPLY. The storage vessel is less than $75m^3$ (19,800 gal).
EQT 4 – Tank No. 2 (Gasoline)	NSPS Subpart Kb – Standards of Performance for Volatile Organic Liquid Storage Vessels [40 CFR 60.110]	DOES NOT APPLY. The storage vessel is less than $75m^3$ (19,800 gal).
EQT 5 – Tank No. 3 (Gasoline)	NSPS Subpart Kb – Standards of Performance for Volatile Organic Liquid Storage Vessels [40 CFR 60.110]	DOES NOT APPLY. The storage vessel is less than $75m^3$ (19,800 gal).
EQT 8 – Leachate Storage Tank 1	Control of Emission of Organic Compounds – Limiting VOC Emissions from Industrial Wastewater [LAC 33:III.2153]	DOES NOT APPLY. Landfills are not covered under LAC 33.III.2153.
	NSPS Subpart Kb – Standards of Performance for Volatile Organic Liquid Storage Vessels [40 CFR 60.110]	DOES NOT APPLY. Vapor pressure less than 3.5 kilopascals (kPa).
EQT 9 – Leachate Storage Tank 2	Control of Emission of Organic Compounds – Limiting VOC Emissions from Industrial Wastewater [LAC 33:III.2153]	DOES NOT APPLY. Landfills are not covered under LAC 33.III.2153.
	NSPS Subpart Kb – Standards of Performance for Volatile Organic Liquid Storage Vessels [40 CFR 60.110]	DOES NOT APPLY. Vapor pressure less than 3.5 kilopascals (kPa).
EQT 10 – Portable Generator	NSPS Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines [40 CFR 60.4230]	DOES NOT APPLY. Generator was constructed prior to June 12, 2006
EQT 11- Portable Pump	NSPS Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines [40 CFR 60.4230]	DOES NOT APPLY. Pump was constructed prior to July 1, 2008, is less than 500 hp, does not have a lean burn engine and is use for non-emergency purposes.

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ID No.	Requirement	Note
EQT 12- Portable Pump	NSPS Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines [40 CFR 60.4230]	DOES NOT APPLY. Pump was constructed prior to July 1, 2008, is less than 500 hp, does not have a lean burn engine and is use for non-emergency purposes.

Prevention of Significant Deterioration/Nonattainment Review

This permit was reviewed for compliance with 40 CFR 70, the Louisiana Air Quality Regulations, New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAP). Prevention of Significant Deterioration (PSD) regulations do not apply.

Streamlined Equipment Leak Monitoring Program

Unit or Plant Site	Program Being Streamlined	Stream Applicability	Overall Most Stringent Program
Colonial Landfill	None	-	-

MACT Requirements

The facility is not a major source of Toxic Air Pollutants pursuant to LAC 33:III.Chapter 51.

Air Quality Analysis

Dispersion Model(s) Used: ISCST3

Pollutant	Time Period	Calculated Maximum Ground Level Concentration ($\mu g/m^3$)	Louisiana Toxic Air Pollutant Ambient Air Quality Standard or (National Ambient Air Quality Standard {NAAQS}) ($\mu g/m^3$)
1,1,2,2-Tetrachloroethane	Annual	0.753	1.70
Chlorobenzene	8 hour	281.84	1100
Vinyl chloride	Annual	1.16	1.19
Hydrochloric acid	8 hour	0.061	180

General Condition XVII Activities

The facility will comply with the applicable General Condition XVII Activities emissions as required by the operating permit rule. However, General Condition XVII Activities are not subject to testing, monitoring, reporting or recordkeeping requirements. For a list of approved General Condition XVII Activities, refer to the Section VIII – General Condition XVII Activities of the proposed permit.

Insignificant Activities

All Insignificant Activities are authorized under LAC 33:III.501.B.5. For a list of approved Insignificant Activities, refer to the Section IX – Insignificant Activities of the proposed permit.

V. PERMIT SHIELD

There is no permit shield requested in this permit action according to LAC 33:III.507.I.

VI. PERIODIC MONITORING

Federal regulation 40 CFR 64 – Compliance Assurance Monitoring is not applicable to this facility.

The facility shall be required to monitor landfill parameters as described in 40 CFR 64 WWW – New Source Performance Standards for Municipal Solid Waste Landfills to ensure proper operation of the gas collection and control system.

The facility will be required to comply with the Louisiana Policy on non-NSPS flares to ensure adequate destruction of VOCs by the enclosed flare. In accordance with this policy, the facility shall be required to determine the heat content of gas going to the non-enclosed flare annually and to continuously monitor for the presence of a flame via a thermocouple.

VII. GLOSSARY

Carbon Monoxide (CO) – A colorless, odorless gas, which is an oxide of carbon.

Maximum Achievable Control Technology (MACT) – The maximum degree of reduction in emissions of each air pollutant subject to LAC 33:III.Chapter 51 (including a prohibition on such emissions, where achievable) that the administrative authority, upon review of submitted MACT compliance plans and other relevant information and taking into consideration the cost of achieving such emission reduction, as well as any non-air-quality health and environmental impacts and energy requirements, determines is achievable through application of measures, processes, methods, systems, or techniques.

Hydrogen Sulfide (H_2S) – A colorless inflammable gas having the characteristic odor of rotten eggs, and found in many mineral springs. It is produced by the reaction of acids on metallic sulfides, and is an important chemical reagent.

New Source Review (NSR) – A preconstruction review and permitting program applicable to new or modified major stationary sources of air pollutants regulated under the Clean Air Act (CAA). NSR is required by Parts C ("Prevention of Significant Deterioration of Air Quality") and D ("Nonattainment New Source Review").

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Nitrogen Oxides (NO_X) – Compounds whose molecules consist of nitrogen and oxygen.

Organic Compound – Any compound of carbon and another element. Examples: Methane (CH_4), Ethane (C_2H_6), Carbon Disulfide (CS_2)

Part 70 Operating Permit – Also referred to as a Title V permit, required for major sources as defined in 40 CFR 70 and LAC 33:III.507. Major sources include, but are not limited to, sources which have the potential to emit: ≥ 10 tons per year of any toxic air pollutant; ≥ 25 tons of total toxic air pollutants; and ≥ 100 tons per year of regulated pollutants (unless regulated solely under 112(r) of the Clean Air Act) (25 tons per year for sources in non-attainment parishes).

PM_{10} – Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured by the method in Title 40, Code of Federal Regulations, Part 50, Appendix J.

Potential to Emit (PTE) – The maximum capacity of a stationary source to emit any air pollutant under its physical and operational design.

Prevention of Significant Deterioration (PSD) – A New Source Review permitting program for major sources in geographic areas that meet the National Ambient Air Quality Standards (NAAQS) at 40 CFR Part 50. PSD requirements are designed to ensure that the air quality in attainment areas will not degrade.

Sulfur Dioxide (SO_2) – An oxide of sulfur.

Sulfuric Acid (H_2SO_4) – A highly corrosive, dense oily liquid. It is a regulated toxic air pollutant under LAC 33:III.Chapter 51.

Title V Permit – See Part 70 Operating Permit.

Volatile Organic Compound (VOC) – Any organic compound, which participates in atmospheric photochemical reactions; that is, any organic compound other than those, which the administrator of the U.S. Environmental Protection Agency designates as having negligible photochemical reactivity.